

How Do Experts Resist a Development Cooperation Project? The Case of the Mozambique–Brazil Generic Medicine Factory

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Abstract: The cooperation between Brazil and Mozambique to set up a state-owned generic medicines factory in Mozambique has been identified as an innovative unorthodox South-South development collaboration. Its implementation – with its translations, adaptations, gaps and contradictions – makes it an interesting object for the socio-anthropology of development and public action. One approach in this field is to focus on the resistance by target groups of development projects. Previous research highlighted the criticisms of the ‘factory project’ implementation or the discrepancies of discourse and representations of the project between Mozambican and Brazilian officials. However, during the negotiation process, key health experts from both countries voluntarily withdrew from the project design or were critics of its conception and evolution. Focusing on what could be seen as a form of resistance, we will analyse who are the experts that distanced themselves, their reasons, and interrogate how their withdrawal led to some of the gaps and translation issues in the implementation process. The present article draws on interviews in Brazil, Mozambique and Europe with health and pharmaceutical experts, diplomats and government officials. We also analysed government reports from both countries, including archives from the Brazilian Ministry of Foreign Affairs.

Keywords: South-South Cooperation; anthropology of public action; Brazil; Mozambique; local production of medicines.

Introduction

Since 2003, the Brazilian government, relying on its experience of local production of antiretrovirals (ARV) and other generic medicines in its public plants, has implemented a cooperation agreement with the government of Mozambique to install locally a pharmaceutical plant. This South-South bilateral Cooperation sets itself apart from other initiatives

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promoting local pharmaceutical production in Africa, as it is neither a joint venture nor a branch of the Brazilian pharmaceutical laboratories. Rather, it is a situation whereby a state provides another state with the technology, training, and funding for the creation of a public-owned industry with public health purposes (Russo and de Oliveira 2016; Rodrigues 2014). Although the factory, the *Sociedade Moçambicana de Medicamentos* (SMM), started production of pilot batches of ARV in 2013 and was at first conceived for a single illness, HIV/AIDS, it gradually included in its portfolio of products essential medicines against illness such as diabetes and heart conditions. This development also contributed to set the generic drug plant initiative apart from other international or global health programs in Mozambique.

This cooperation project is a frequent case study in International Relations, Political Science and Public Health fields, as South-South Cooperation (SSC) became a trending research topic. In the last decade, 15 publications discussed this project, though many more mention the factory project in broader articles about Brazilian SSC. Most of the publications are from Brazilian scholars, but it is noteworthy that a share of publications was made by Brazilian public servants who worked directly in the project. Because most of the researchers (including myself) went to Mozambique to conduct interviews with the experts and technicians implementing the factory, we can state that the cooperation project became a coveted research object and the factory itself an over-invested fieldwork site (Chabrol 2008).

Within these publications, there is a strong interest in understanding the narratives and inner mechanism around the project by analysing the South-South Health Cooperation solidarity discourse, principles, and the way it interweaves with Brazilian Foreign Policy (Faid 2013; Milani and Lopes 2014; de Almeida 2016; Achcar 2022). The publications authored or co-authored by Brazilian civil servants documented thoroughly the steps of the implementation shedding a light on political, legal, and practical challenges faced by this 'unorthodox' SSC project (Rodrigues 2014; Russo et al. 2014; Russo and de Oliveira 2016). As with other Brazilian SSC initiatives, scholars also interrogate how the practical conditions of the project vary from the official discourse, from the translation gaps around the vocabulary and concepts at the heart of the initiative to the asymmetries of power and capabilities, contradictions and dilemmas posed by the implementation (Cesarino 2013; Abdenur and Marcondes 2017; Esteves and Assunção 2017).

Those latter points are characteristic of development projects. They have been the object of fertile literature in the last three decades by an 'invisible college' of socio-anthropologists (Olivier de Sardan 2005). They showed that qualitative sociology and ethnography are of particular added value to analyse these phenomena. In the last decade, these scholars have shifted their attention to public action in the Global South (Bierschenk and Olivier de Sardan 2014; 2019; Lavigne Delville 2017). They argue that, especially for African State bureaucracies, an important share of transformative actions induced by global donors takes place inside the state apparatus. The socio-anthropology of development's questions and methodology converge with those of the sociology of public action, as both are inspired by the methods of the sociology of translation (Callon 1984; Latour 1987).

In the first part of this article, after a literature review, I will argue that their proposition of an anthropology of public action is pertinent to analyse the South-South development projects led by Brazil. As the conception of the Mozambican drug plant and other projects have been inspired by domestic public policies and carried out by Brazilian civil servants, their practices are mainly those of their state bureaucracy. Insofar as this interaction took place, experts from both countries – all civil servants in state bureaucracies – were involved.

In the interviews carried out with the professionals of the many institutions responsible for the project, the expression ‘there were resistances’ was recurrent. It was used to describe the posture or attitudes of individual members of the institutions, or even the institution itself, who criticised, opposed, or argued against or for a different version of the drug plant project. The second part of this article will focus on these individuals, described as experts, i.e., specialists with considerable knowledge and experience in their field, who withdrew from the project or distanced themselves from it even though they were among the ‘obvious’ professionals to take part in it. I will analyse who are the experts that distanced themselves in a specific stage of the project, from 2003 to 2008 during negotiation and planning, what their reasons were, and interrogate how their withdrawal led to some of the gaps and translation issues in the implementation process.

Methodology

The present article draws on 78 interviews and a dozen informal conversations carried out between 2014 and 2019 in Brazil, Mozambique and Europe with health and pharmaceutical experts, diplomats, government officials from Brazil and Mozambique. Most participants were directly involved in the project to install the SMM generic medicines factory in Mozambique, such as Fiocruz and Farmanguinhos experts and technicians. I conducted supplemental interviews with relevant professionals working or who had worked at NGOs, experts at international institutions or researchers who had knowledge about this project or the context in which it took place. The interviews were conducted in Portuguese, English, and French with a semi-structured interview guide. I changed the questions depending on the interviewee’s experience, status, and relation to the generic medicines factory project and its context in Mozambique. Most participants agreed to audio recording, those interviews being fully transcribed. I anonymised all interviewees, except for participants who are renowned public figures and authorised to be identified. All interviewees were informed that they could be recognised because of the small number of people involved in the project and the press coverage that accompanied the implementation¹.

I also analysed government reports published by both countries, archives consisting mostly of diplomatic correspondence from the Brazilian Ministry of Foreign Affairs (MRE in its Portuguese acronym, also referred to as Itamaraty), and a collection of national and international newspaper articles on the cooperation project. Although it is not among the main material for this article, I carried out five weeks of daily ethnographic observations of the Brazilian technical missions to train the local staff at the drug plant in Mozambique.

South–South cooperation and resistances as objects for the socio-anthropology of public action

Convergence and synergies of three research traditions

One of the approaches of the socio-anthropology of development is to focus its analysis on the internal workings of development projects, the institutions and experts conceiving and implementing them, and the brokers in between the many interstices (Bierschenk, Chauveau, and Olivier de Sardan 2000). These ‘Aidnographies’ highlighted the differences and drifts between planned actions and the actual implementation, revealing the logics, discourses and practices of the experts, either in the local sites of implementation or at headquarters, and how their knowledge and identities are built and negotiated in complex interfaces of local and international politics (Atlani-Duault 2007; Rottenburg 2009; Mosse 2011).

In the last decade, some of these scholars gradually shifted to the study of public action within the bureaucracies of the states of the South, particularly those ‘under aid regime’ as international aid funds were devoted to sector-wide reforms within the states (Lavigne Delville 2017).

After all, development policies are merely a particular form of public policy that are designed, managed and financed from outside a country but implemented within it with the direct or indirect support and instrumental use (and sometimes resistance) of national public actors (Bierschenk and Olivier de Sardan 2014: 49).

As with development, the anthropology of public action also brings attention to the non-compliant behaviours of bureaucracies, the practical norms parallel to official norms, the development of different strategies to adapt or mitigate their everyday practice in the face of shortages, inadequacies and gaps between the official norm and their work context (Olivier de Sardan 2016).

These anthropologists have connected their methods and interrogations with those of the sociology of public action as it similarly analyses the processes of negotiation, design and implementation of public policies and other society-wide interventions, not necessarily conducted by the state, framing those processes as complex arenas where multiple and diverse actors and institutions make alliances or dispute world visions, institutional logics and diverging interests. Both traditions consider the diversity and complexity of networks of actors in international and local development designing and implementing interventions for social change and the crucial aspects of contextualisation (Hassenteufel 2011). For instance, both Hassenteufel and Olivier de Sardan (2005), building on the sociology of organisations, postulate the multidimensional rationalities of social actors, both individuals and groups, and their relative agency to act in various strategic combinations depending on the constraints, power relations and resources, giving way to compositions (bricolages) with structures, bypasses, coalitions and the creation of new contexts and arenas.

Among the limited agencies available to actors in constrained environments, one interesting aspect is resistance. Sociology of public action, in particular studies on instruments of public policies, has shown how intermediate actors can contest, divert, re-appropriate, or neutralise instruments (Bourhis and Lascoumes 2014). A taxonomy of resistances was inspired by a review of Hirschman's *exit*, *voice*, and *loyalty* concepts, which he forged after a particular discussion following his book *Development Projects Observed* (1967), to go full circle between public action and development studies (Hirschman 1970; 2014). Indeed, resistance in development interventions, usually leading to bypassing or co-optation schemes, have been described among all kinds of target groups, from peasants in agricultural projects, to nurses in primary health units, or new local NGO creators supported by good governance promotion of international agencies (Olivier de Sardan 2005; Atlani-Duault 2007; Olivier de Sardan et al. 2017).

Socio-anthropology of development and sociology of public action also converge in their common references to the sociology of translation or actor-network theory. The former two adopted the latter's principle of looking into the dynamics and processes where chains of displacements and transformations take place: from formulating problems (or putting them in the agenda) to making coalitions between diverse actors (professional groups, politicians, interest groups, non-human actants...), by negotiations and adjustments of meanings and identities, mobilising all these networks successfully or not (Latour 1987; Lascoumes 2014).

Studies of travelling models (Olivier de Sardan, Diarra, and Moha 2017) or public policy circulation (Porto de Oliveira 2017) have shown how networks or coalition of promoters (or spokespersons) of a successful model or policy are crucial to bring and finance models/policies into new contexts. However, these models/policies often change in meaning or practice as they travel or as they endure the test of their new context, where they are adapted, accommodated, or boycotted by civil servants. Either in development projects or the field of policy transfers, resistance allows to pay attention to and reveals the power relations between actors and/or within institutions, and the logic of implementation that leads to compromises and arrangements between local, national, and international institutions (Porto de Oliveira and Pal 2018).

Brazilian South-South Development Cooperation (SSDC): transfer and development as public action

The study of development projects through the lenses of an anthropology of public action is particularly relevant to analyse Brazilian SSDC. SSDC projects are development actions, even if their conception and implementation usually differ from North-South development initiatives (Besharati and Esteves 2015). Development projects originating from developed countries mobilise networks of specialised experts, specific organisations, and institutions, such as development agencies, civil society organisations, NGOs or specialised companies. These initiatives are funded by budgetary lines and financial flows from the Global North and mobilise forms of knowledge and vocabularies which together

form the ‘developmentist configuration’ (Olivier de Sardan 2005). Albeit traditional aid has increasingly framed itself as apolitical, it is constantly diffusing specific norms across the globe that often align with the objectives of donor governments rather than with the recipients’ priorities (Pfeiffer 2013; Keshavjee 2014).

South-South development initiatives have, since their origins in the 1950s, emphasised narratives of horizontal collaboration, reciprocity, non-conditionality, mutual respect for partners’ sovereignty and demands, and sharing relevant experiences to overcome similar problems. Historical and contemporary SSDC institutions and actors thus frame it as cooperation, rather than development or aid, to distinguish its actions from the traditional Northern foreign aid. However, studies comparing different SSDC from emerging countries found that this translates into heterogenous schemes, instruments, institutions, and actors implicated, with varying degrees of involvement from the emerging states bureaucracies and private sectors, which raises new interrogations on the gaps between political discourse and real-life practice (Amanor and Chichava 2016; Birn and Muntaner 2019).

Brazilian SSDC (also referred to as Technical Cooperation or Horizontal Cooperation) draws on domestic public policies and expertise built on its own development issues with ‘success over a considerate period of time’ (Esteves, Fonseca, and Gomes 2016). Scholars have thus justifiably identified several projects as policy transfer initiatives (Morais 2005; Milani and Lopes 2014; Milhorange de Castro 2014; Rodrigues 2014; Marcondes de Souza Neto 2017). These experiences are selected to be transferred or adapted on an ad hoc basis to other developing countries either by experts within specific government agencies or ministries, diplomats or public policy coalitions that also serve as ambassadors (Cesarino 2013; Cabral, Russo, and Weinstock 2014; De Bruyn 2018; Porto de Oliveira 2017). The preeminent role of different levels and institutions within the Brazilian state bureaucracy and the fact that the Brazilian SSDC is mainly coordinated through the Ministry of Foreign Affairs (MRE) makes the case for analysing its projects through the anthropology of public action.

Brazilian SSDC is not implemented by development-only experts. Although Brazil does have a cooperation agency (*Agência Brasileira de Cooperação*, ABC) since 1987 under the umbrella of the MRE, its function is predominantly administrative and of mediation between foreign partners and government sectors (Milani 2017). The projects it manages do not benefit from a specific legal framework or financial sources designed to operate them, which is pointed to as one of its fragilities, but dwell on triangular cooperation schemes with international and bilateral aid agencies (Cabral, Russo, and Weinstock 2014).

Rather, Brazilian SSDC projects abroad are implemented by Brazilian public servants from domestic specialised agencies, such as the Oswaldo Cruz Foundation (Fiocruz) for health, the Brazilian Agricultural Research Corporation (Embrapa) for agriculture, the SENAI system for industrial training, specific ministries or universities. Such institutions act with important levels of autonomy vis-à-vis ABC or the MRE and lead projects with a strong influence of their internal culture (Leite, Pomeroy, and Suyama 2015; Esteves and

Assunção 2017; Lima 2017; De Bruyn 2018). Nevertheless, because ABC is dependent on the MRE, diplomats play a crucial role at the Ministry or in Brazilian Embassies in Africa and Latin America, negotiating the cooperation agreements and sometimes mediating the implementation of projects. As policy transfers and SSDC became preeminent instruments of foreign policy during President Lula's administration, both as a strategy to legitimise policies domestically and to increase Brazil's status and influence in the international arena, there is a strong case for the influence, politicisation and instrumentalization of cooperation projects (Almeida 2016).

The project to install a drug plant in Mozambique in Brazil's activist HIV/AIDS context

Previous studies adopted the theoretical framework of policy transfer to analyse the installation of the drug plant in Mozambique. Indeed, the plant was first conceived as an ARV manufacturer and was designed to supply the public health system. It was inspired by the success of the Brazilian policy that combined industrial and health policy, as the production of ARV by public and private drug plants was promoted to provide free of charge treatment in the Brazilian National Health System (SUS) (Cassier and Correa 2003; Biehl 2004). The AIDS treatment policy revitalised the 18 state-owned public laboratories and manufacturing plants (Loyola 2008; Flynn 2015). It strengthened Farmanguinhos (officially Institute for Pharmaceutical Technologies), the main public-owned pharmaceutical laboratory in Brazil, part of Fiocruz, which is the Brazilian Ministry of Health public health research institution. This dynamic also participated in the adoption of a generic medicines law in 1999 and the creation of the Brazilian Health Regulatory Agency (ANVISA), including the regulation and certification of medicine production and a specific view of its role regarding SUS (Correa, Cassier, and Loyola 2019).

The inception of the technology transfer offer from the Brazilian government can be traced back to the early 2000s, in the context of developing countries and civil society struggle with multinational pharmaceutical companies to lower ARV drugs prices and the diffusion of moral economy values on access to medicines (Cassier and Correa 2014). The Brazilian government articulated its public health AIDS experts and diplomats to invest in the global arena to defend and legitimise its model of generic ARV production and public distribution of the treatments (Biehl 2004). It did so by promoting its HIV/AIDS model to other developing countries, by making coalitions with civil society movements across the globe that were advocating for access to HIV/AIDS treatment and achieving a synergy that allowed for the transformation of global norms on access to medicines (Nunn, da Fonseca, and Gruskin 2009; Flynn 2013). These actions led to an increase of cooperation demands from Latin American, Caribbean, and African countries, from training on HIV/AIDS care and prevention to demands for the purchase of generic ARV made in Brazil.

The responses to these and other demands of health cooperation took many shapes, which can be associated with each institution's cultures, representation of its missions, interests, and their embeddedness in networks with different partners. The Brazilian HIV/

AIDS Program stepped up its cooperation with agreements, training, medicine donations and triangular schemes with a multitude of partners (Lima 2017). After supplying ARV for *Médecins Sans Frontières*' (MSF) Khayelitsha treatment project in South Africa, Farmanguinhos began a fruitful collaboration with MSF and other partners in the Drugs for Neglected Diseases Initiative for developing new drugs and transferring pharmaceutical knowledge (Nauta 2011; Barbeitas 2019).

Fiocruz has an important history with Latin American Social Medicine networks, which translates into specific views of health and the role of the state, enshrined in the 1988 Brazilian Constitution as the right to public health, and through a programmatic concept developed by Fiocruz, the Brazilian Structural South-South Cooperation in Health (C. Almeida et al. 2010; Esteves and Assunção 2017). Throughout the 2000s, Fiocruz and the Ministry of Health extended their networks to Lusophone countries in Africa and invested in the agenda for health collaboration within the Union of South American Nations (Unasur) (Ventura 2013; Carillo Roa and Baptista 2015; Santos and Cerqueira 2015; Fonseca and Buss 2017).

The Brazilian activism to ensure access to ARV had a particular resonance in Mozambique. Since the 1990s, Mozambique was dependent on Northern aid to buy its medicines and could not afford the ARVs at multinational prices to face a soaring HIV/AIDS epidemic (Pavignani and Durão 1999). While this was the case for many African countries, it was particularly dramatic for Mozambique, as it had had an ambitious pharmaceutical policy at the time of independence that included a developmentalist project of local production of medicines (Martins 1983; Antonielli 2019). Mozambican health officials were thus especially attentive to the Brazilian experts' willingness to share the technology to produce ARV, as detailed in the next section.

Resistance: exit and voice

The known uncertainties for transferring the ARV production technology

In *Development Projects Observed*, Hirschman (2014) demonstrated that planners underestimate the challenges and tasks necessary to implement development projects. A 'hiding hand' conceals the uncertainties, the realistic costs, and conditions at the moment of the decision only to reveal them a certain time after the start of the execution of the project. As a result, at the beginning of a given project experts have overly optimistic expectations.

When the Brazilian government offered to transfer the technology, know-how and training in antiretrovirals production to African countries, we could assume that they were being optimistic. The original proposal in 2000 was to transfer the industrial production technology of eight ARV, 'including the methodologies for chemical analysis of raw materials and finished productions, dissolution test and stability test' (Mingorance 2000). The condition for this transfer was that the recipient country provided their locally produced generic ARV free of charge for their population living with HIV. The production files and the training were to be provided by Farmanguinhos. It did not specify if the institution receiving the technology and the training was to be a public or private drug plant.

This distinction would become important in the years to come, and it was significant for some of the experts making the proposition (Achcar 2022). It was also expected that the receiving country should not have adopted intellectual property laws recognising patents (Dutilleux 2000).

Although it was not specified in the first announcement, made by Eloan dos Santos Pinheiro, then director of Farmanguinhos, there were other practical conditions:

You need an ensemble of things recommended to make local production, there is a series of criteria. Water installations, human resources. [...] You need to have minimal conditions, a good regulatory centre, which can be regional, shared between some countries, like South Africa. You train, share it with other countries, but you need to have minimal conditions for the flow of the commodities. Because in Africa there was no plant making the Pharmaceutical Active Ingredients (API), you had to import; as you import you have to analyse. So, to have successful actions in this sense, you had to have an ensemble of premises (Interview N.8 Eloan Pinheiro, Brazilian Chemist).

Brazilian health experts who repeated the offer at the 13th International AIDS Conference in Durban, South Africa, were aware that a limited number of countries could apply for it. Paulo R. Teixeira, then director of the Brazilian National AIDS Program, declared to a South African media at the time that:

This kind of expertise cannot be accepted by many countries, because they do not have the technological capacity to capitalise on it but, in Africa, we believe that South Africa, Nigeria and Kenya could benefit – their representatives at the conference were very interested (Engineering News 2000).

He also stressed that having medicines was not enough, African countries needed a public health system with the capacity to distribute the medicines effectively to their population and laboratory network with the technology to test for the efficacy of the treatment (CD4 counting tests and viral charge) (Sato 2000).

In 2002, Teixeira made the offer again at the next International AIDS Conference in Barcelona, confirming the narrowness of the conditions required according to the experts. In other words, they were not overly optimistic because they were aware that the technology offered did not work by itself, it needed different systems of knowledge, capabilities and organisation that were known and were context-dependent (Hirschman 2014). The Brazilian policy of local ARV production for distribution free of charge in a public health system could not be a standardised model that could be reproduced as such, as many best practices do in development aid projects (Oliveira-Cruz, Kowalski, and McPake 2004; Olivier de Sardan, Diarra, and Moha 2017). In the two-year interval, the Brazilian Health Ministry and Brazilian embassies in Africa were approached by local Ministries of Health

regarding the offer, including Mozambican health officials. Throughout this period, experts continued to emphasise that the technology transfer could only happen with African countries that had the infrastructure to produce drugs, and that ‘the difficult issue was testing for quality, for which Brazil was also offering assistance’ (Izique 2001; Dyer 2002).

As we will see in the next section, for Brazilian experts with relevant experience in ARV production and its distribution countrywide, ‘efficiency’ and ‘quality’ were the core criteria that motivated their opinions and positions regarding the technology transfer to Mozambique as a solution to improve access to ARV in this country.

The exit of HIV/AIDS experts

Although a cooperation agreement signed in 2001 between Brazil and Mozambique mentioned ‘technology transfer for ARV production’ (Brasil/Moçambique 2001), a Mozambican HIV/AIDS expert working for the Mozambican National AIDS Council remembers that the talks on the issue converged into the idea for a laboratory to test the quality control of imported medicines:

I was part of a workgroup that was discussing a plant, not necessarily an antiretroviral plant. I remember it was supposed to be a laboratory, it was to establish a laboratory to certify the quality of medicines that enter Mozambique, including in this case the antiretrovirals (Interview N.33 Mozambican Medical Doctor, CNCS).

This same expert explained that back then there were talks within the Southern African Development Community (SADC) not to proliferate drug plants in the region. Indeed, South Africa, Zimbabwe and Tanzania already had drug factories and were planning to include ARV in their output. The expectation was to homogenise the treatment protocols in the southern African region considering the circulation of people and commodities. For Eloan Pinheiro, thinking in regional terms was a better approach:

Mozambique is located right next to South Africa where there was already, Aspen was already producing [ARV since 2003] because it already had installed capacity, a huge internal competence, and they had a regulatory agency, something Mozambique did not have. I mean, I did not understand why Mozambique was the country considered for installing a local production, it has so many deficits, so many fragilities. And it’s so close to South Africa, and there were also other countries in more advanced stages (Interview N.8 Eloan Pinheiro, Brazilian Chemist).

According to this logic of ‘quality and industrial capabilities’, at the time the project was conceived in 2002–3 and planned in 2004–6, Mozambique did not have the industrial capabilities or the trained personnel to start up a medicine manufacturing plant. Nor had the state the specific quality control capacities to start up a medicine manufacturing plant.

The context of existing regional pharmaceutical units and the constraints already experienced by those plants also indicated the complexities of the task (Russo and Banda 2015). It was therefore not considered by experts to be a suitable candidate for the Brazilian offer to transfer technology of ARV production with the aim to increase the access of local populations to HIV/AIDS therapies.

Pinheiro was not the only expert in Brazil to frown upon the announcement of the agreement of Brazil's engagement to install an ARV plant in Mozambique in November 2003 (Brasil/Moçambique 2003). Internally, civil servants from both Ministries of Health and Foreign Affairs did not believe Mozambique had the capabilities necessary to install a factory and receive the technology transfer. They also doubted that Brazil could provide support almost from scratch to help the Mozambican government build these capacities. The interviewees referred to this discussion as 'resistance': as a senior Brazilian diplomat told me, '[t]here was a lot of resistance, including at the Ministry of Health and even inside Itamaraty, because people did not believe that Mozambique had the conditions to have a plant.'

According to Olivier de Sardan (2005: 150) 'resistance to an innovation has its motivations and its coherence, whether strategic or notional.' Although he was referring to resistance from target populations to development projects, the claim can also be made of experts and professionals faced with donor or state demands for development projects. To understand resistance, we must carefully analyse the motivations 'from the inside,' by trying to unfold the multidimensional rationalities and the context in which they are grounded. For instance, from the point of view of senior experts working at the Brazilian HIV/AIDS Department, the issue at stake was how to efficiently provide ARV to Mozambique, which then had an estimated 1.5 million people living with HIV/AIDS (CNCS 2004). From this perspective, local production was not effective:

Because local production can only happen where you have a context of quality control, when there is a sanitary regulation that allows... One thing is the quality control that is part of the GMP or Good Manufacture Practises, and there is another that is some kind of functional regulatory agency. You need to marry both things, it cannot be separated. And Mozambique had nothing. Although I am super... I believe that local production makes sense in the way to develop the country, to keep a specialised workforce, to be part of mechanisms that make the country grow. In some areas it is not efficient, it is not a good way to.... So, I had many doubts in this sense regarding an investment of this magnitude [...] I'm not against local production, but it is a development policy. Health should pay the medicines at the lowest possible price with guaranteed quality and that will be available to people when they need it. With more and better efficiency, you can include more people [in treatment]. [...] Mozambique had, still has, an expressive epidemic, but a factory in this case was not going to help increase the access. But it was a

priority for the [Brazilian] government. And every time ... my own feeling at the time was that even the MRE was not that interested in trying the factory. They were trying to bury it (Interview N.73, Brazilian Medical Doctor, National AIDS Program).

As this Brazilian HIV/AIDS expert states, the issue of access to medicines in Africa was perceived to be separate from the issues of developing industrial capacities. India and Brazil had managed to use and expand existing capacities to supply cheap ARV in the 1990s (Loyola 2008; Flynn 2015; Quet 2021), creating those capacities in Mozambique was thus a different kind of endeavour. For that reason, she and other experts at the HIV/AIDS Department did not participate in the missions and meetings regarding the agreement to install the drug plant in Mozambique.

Indeed, important displacements took place regarding the institutions and the experts involved with the project. A survey in the diplomatic correspondence between the Brazilian Ministry of Foreign Relations and the Brazilian embassy in Maputo allows listing who went in the missions to deal with the drug plant negotiation. First, from 2000 to early 2003 the experts or technicians involved in the negotiation of the cooperation with Mozambique worked in the Brazilian AIDS Program. Second, from July 2003 to September 2004, there are three missions to Mozambique regarding the negotiation of the drug plant. Chemists from Farmanguinhos, including its then president in June 2004, were on the missions. Mozambican Ministry of Health experts went to Brazil and visited Farmanguinhos in August 2004. Third, from 2005 until 2007, it was the turn of consultants hired and managed by Fiocruz to conduct an economic viability study to plan the drug plant. We can postulate that some of these displacements regarding involved actors and institutions resulted from some previous withdrawals from the process.

Looking back at that context, by the time the economic viability study team went to Mozambique to gather data for the planning in 2006-7, the Mozambican Ministry of Health, most especially its HIV/AIDS experts, were dealing with a sharp increase in external funding and projects to finance its response to the epidemic. They were busy coping with the different norms, requirements, and coordination necessary to rolling out ARV treatment in their country funded by different schemes starting in 2002 with the Clinton Health Access Initiative and the Global Fund to Fight HIV/AIDS, Tuberculosis and Malaria, and from 2003 onwards the US Government President's Emergency Plan for AIDS Relief (PEPFAR) (Matsinhe 2006; Høg 2008; Pfeiffer 2013). Those options, because of their colossal financial amounts, probably looked more efficient to solve the problem of access to ARV, even if it meant a hindrance of autonomous decisions for the Mozambican officials. But the Ministry of Health in Mozambique had already gained relevant experience in pragmatically managing donors in the context of medicine provision (Pavignani and Durão 1999).

The exit option from the drug plant decision space for Mozambican experts was made in comparison with other foreign aid schemes happening at the time and converges with the Brazilian HIV/AIDS experts logic of efficiency. As the Brazilian offer to transfer the capacities to produce ARV did not materialise in the first years after the announcement,

Mozambican health officials also started feeling disillusionment (Taela 2017), like this expert from the Mozambican National AIDS Council:

I must confess to you, and I felt it for a very long time, that it is very difficult to achieve agreements that were fluid with Brazil, in many areas. Because the turnover of people but also probably the bureaucratic question inside Brazil regarding the processing of the dossiers took a lot of time. [...] My expectation was of something else. Later I withdrew from the process and afterwards got to know that there was a reorientation of the factory not only for producing antiretrovirals but eventually for other medicines that are more needed (Interview N.33 Mozambican Medical Doctor, CNCS).

Chemists, pharmacists and medical experts in Brazil and Mozambique agreed that the priority was ensuring access to quality medicines, or an ‘efficient access logic.’ They were also aware that the Brazilian experience was possible due to a synergy of actors, including the pressure from civil society groups, which was not reproducible elsewhere (Oliveira-Cruz, Kowalski, and McPake 2004). Another aspect made explicit by João Biehl (2004) was that the main experts from Brazil believed that the late 1990s synergy around generic medicines happened because of ‘efficient management.’ In the mid-2000s, efficiency looked more plausible coming from the new international funding schemes to provide ARV for Africa. The displacement caused by the arrival of these schemes also had important consequences for the possibility of installing a drug plant in Mozambique.

Voicing the economic viability logic

In the 2003 agreement, Fiocruz was appointed by the Brazilian Ministry of Health as the body responsible for executing, monitoring, and evaluating the project’s actions (Brasil/Moçambique 2003). Fiocruz civil servants are a highly qualified group, made up by researchers and professors, with extensive experience in analysing and trying to improve public health policies. However, behind closed doors they also did not believe Mozambique had the conditions to host a drug plant. Some argued that the survey missions would be an overly expensive endeavour only to show that such an investment was not economically sustainable. By doing so, they were resorting to voice rather than exit. *Voice* is defined by Hirschman (1970: 30) as any “attempt at changing the practices, policies, and outputs” of an organisation, firm, or project. During the preparatory meetings at the MRE they argued that the financial resources for the study would be put to better use if Brazil expanded the donation of medicines to Mozambique:

[T]he President of FIOCRUZ, Dr Paulo Buss, exposed his perception that, according to preliminary data and the information gathered from the missions of the Ministry of Health to Mozambique, the study may reveal the economic and technical infeasibility of the factory, considering factors such as the lack of infrastructure, of

technical personnel, production scale, the procurement policies of donors, etc. Therefore, he suggested that the execution of the viability study be preceded by a first phase, with the duration of 40 days more or less, at the end of which a “preliminary study” would be made that would already forecast the conclusions of the full study. With that preliminary document, the Brazilian and Mozambican parts could then discuss the redirection of the cooperation on HIV/AIDS with Mozambique. Dr Buss emphasised, in this particular, that the high costs of the study in question, could be eventually avoided if the resources already transferred to the Itamaraty would be intended for other concrete activities of cooperation (he mentioned, for example, that with those amounts, one could prevent the contamination by the HIV/AIDS virus at birth of around 240 thousand children, at the price of US\$ 2 for each mother/child) (Diplomatic Correspondence ‘SERE para Brasemb Maputo’ n°103 on 03/03/2005).

The resources referred to in this meeting were the US\$ 455 000 budget from the MRE to execute the economic viability study, whose objective was to be a first step towards the implementation of the drug plant by making a rigorous survey of the conditions of economic sustainability and the needs of Mozambique (Brasil/Moçambique 2005; Rodrigues 2014). Although Fiocruz was responsible for the study, it hired independent consultants with experience in the Brazilian Ministry of Health, in Brazilian Federal State local health bodies, mostly physicians, but also a pharmacist consultant and a young economist. No one from Farmanguinhos took part in this phase (Fiocruz 2007).

The Mozambican Ministry of Health designed the Legal Advisor to the Minister of Health, a financial administrative officer from the Ministry and an architect’s office to participate in the study. Surprisingly, no senior Mozambican Health Expert participated in the elaboration of the study. Although some experts, such as some of the country’s leading pharmacists, wanted to participate in the discussion on the possibility of installing a drug plant in Mozambique, they also remained sceptical of their country’s capacity to host such an industry, pointing to the low number of skilled personnel and the lack of financial resources. A senior Mozambican health economist, who worked for decades implementing Mozambique’s drug policies, also believed that the drug plant only for ARV was not a viable idea. He explained why he chose not to participate in the economic viability study for the drug plant:

Already at that time, I saw with great difficulties the possibility that this enterprise would have economic feasibility. And my advice was always: we need to think this through, a plant for Mozambique, to produce only antiretrovirals, forget it, this will not have viability [...] So much that I was a member of the consultative council of the minister [of health] at the time, I stated my opinion. But it was an opinion, like every other else, isn’t it, they are valid (Interview N.61. Mozambican health economist, Mozambican Ministry of Health).

This expert was inside the decision-making instances in the Mozambican Ministry of Health and voiced his concerns before he opted for an exit strategy. He went on about the reasons his argument was based on:

I was convinced of many things. First, the scale of production would necessarily entail a high unit cost. In other words, the plant would not be competitive internationally. So, if the country continued to depend on donations, as it continues to depend on donations, we would not be able to buy the products from the plant. Therefore, the financial infeasibility. In another context where the country had capacity, as it is Brazil's case, and did not depend much on donations to supply the National Health Service, probably the context would be different. Because then one could, for instance as a protective policy says OK, independently of the costs that the factory has, we will buy from the factory because we are building a local industry that guarantees us autonomy, etc., very well, the usual political speech. But it was not the case of Mozambique (Interview N.61. Mozambican health economist, Mozambican Ministry of Health).

Both the Mozambican health economist expert and Fiocruz then-president expressed that the 'procurement policies of donors' were an important constraint facing a future drug plant in Mozambique. Indeed, 80% of the country's medicine expenses were funded by a large community of donors with which Mozambique's leading health experts had spent years negotiating different procurement arrangements to better respond to the country's needs (Pavignani and Durão 1999; Fiocruz 2007). The donors and Mozambique's common fund for medicine procurement adopted strict rules to maximise the donated resources, resorting to tenders to guarantee the best prices for drug provisions for the country. Because local private factories operating in Mozambique in the 1990s and early 2000s were too small to make economies of scale and offer competitive prices, they were unable to sell for the government, which had little resources to support them either with its health or industrial policies (Antonielli 2019).

Thus, many interviewees doubted that either public enterprise, private capital or joint ventures could be efficient ways to introduce local production of medicines in the country in an economically sustainable way. To make that happen would require policies regarding intellectual property and patent of medicines, coordinated within the SADC countries on a regional level by the African Regional Intellectual Property Organization (ARIPO), which also lacked the critical capacity to harmonise and design relevant legislation to encourage local production of medicines (Avafia 2015). Other major policy changes had to be made, such as linking the industrial policy with public health objectives, including introducing fiscal incentives and subsidies, and ensuring the government and donors were engaged to buy the local production (Pinheiro et al. 2014; Russo and Banda 2015).

Although the Brazilian and Mozambican experts did not allude to the examples of other countries, they were voicing the common wisdom of the early 2000s that manufacturing drugs in Africa was not possible in a context of open markets. In other African

countries, private and public drug plants struggled to stay competitive by investing in infrastructure, qualified human resources and increasingly higher quality standards while facing the Indian generic drug manufacturers' competition.

The emergence in the 2000s of donor-funded markets with impressive sums to purchase drugs to increase treatment for HIV/AIDS, malaria and tuberculosis did not necessarily mean new markets for local producers. Donor-funded procurement schemes required medicine manufacturers to have quality certifications, most often the World Health Organization prequalification set up in 2001 in the context of conflicts over intellectual property and increasing measures against counterfeit drugs led by multinational pharmaceutical industries with international organisations (Quet 2021). Although some donors, such as the Global Fund to fight HIV/AIDS, Malaria and Tuberculosis did not exclude local producers from its tenders and created schemes to support local manufacturers, in practice, the quality requirements and procurement in bulk constituted barriers for local medicine manufacturers (Pourraz 2019; Chorev 2020). Investing in the upgrade of their infrastructure and procedures to comply with the quality standards reflected on their production costs and consequently affected their competitiveness, even in those countries with industrial policies to support local industries.

However, the Brazilian health experts with experience in the Brazilian model of ARV production and distribution in the public health system were not familiarised with the purchase requirements of PEPFAR and the Global Fund, which became the biggest purchasers of ARV medicines in the world, something which their Mozambican counterparts were aware as stated by the Mozambican health economist above. The Brazilian model was thus not perceived as a transferable public policy for Mozambique concerning the economic viability logic in the context of donor-funded drug markets.

The recomposition of the project with different networks

The logic of the experts active in decision-making spheres of the Mozambican Ministry of Health, the National AIDS Council, the Brazilian AIDS Department and Fiocruz, either the 'efficient access logic', the 'quality and industrial capability logic' or the 'economic viability logic' – all three very much intertwined –, made them resist and distance themselves from the planning, conception, and later implementation of the Mozambican drug plant. The expression of resistance – through voice and exit – by the experts showed that the problematisation, the enrolment and mobilisation processes to make the drug plant the solution to increasing the access to ARV in Mozambique did not succeed (Callon 1984). For the drug plant to happen, other chains of intermediaries had to be enrolled, according to another alignment of interests. This eventually took the shape of new actors who occupied the space left vacant by the experts who withdrew and who progressively shifted the drug plant's objectives and meanings, diminishing its centrality and linkage to Mozambique's HIV/AIDS policies. The 'sidetracking' of the project to install a drug factory should not be considered as a deviation from the project's original objectives, but as an evolution that shows that the project was appropriated by local actors and adjusted to its context (Olivier de Sardan 2005).

First, the arrival of new Ministers of Health in Mozambique and Brazil in 2005 and 2007 respectively, allowed for a new coalition of interests and the introduction of new brokers, who expanded the scope of the drug plant to include other essential medicines in its portfolio. By doing so, they took into account the criticism voiced by the Health Economist: the shift to focus its production on essential medicines offered the possibility of economies of scale, although the financial sustainability issue remains a main constrain for the SMM. It mattered that the new Mozambican Minister of Health also had a particular agenda of resisting donors' policies (Høg 2008) and symbolically linked the Brazilian drug plant project with the autonomous pharmaceutical policy of Mozambique's independence (Martins 1983).

Secondly, the designation of Farmanguinhos in 2008 to execute the project brought new experts to management positions that made new arrangements with Mozambique's health officials (Farmanguinhos 2010). In particular, the Farmanguinhos experts benefited from the arrival of a highly qualified pharmacist at the head of Mozambique's Pharmaceutical Drug Regulation Department who was committed to reinforcing it through cooperation with Brazil's ANVISA and other international bodies to achieve international standards as an autonomous drug agency (ANVISA 2012; Santos and Cerqueira 2015). Those two developments in the project's life are not the only dynamics that made the SMM come to life, but they were among the critical junctures that allowed the reorganisation of the project in ways that were satisfactory to both Brazilian and Mozambican actors and institutions in the second half of the 2000s. As Achcar (2022) argues, different political logics were in tension during different phases of the factory's negotiation and installation phases spanning for almost two decades, which required intensive discursive labour to attain compromises and reconfigurations that allowed the factory cooperation to continue.

Conclusion

In this article, I proposed to interrogate the Brazilian SSDC in health through the lenses of the anthropology of public action, which combines the methodologies and contributions from the socio-anthropology of development, the sociology of public action, including policy transfer, and the sociology of translation. These research traditions have in common the postulate that any given social transformation project, particularly those carried out by states or within states with the concurrence of external actors and institutions, constitute complex arenas where partners and adversaries interact, compromise, or diverge according to their different interests, power struggles, world views, and strategies.

By describing the actors participating in the Brazilian SSDC, all of which work within the state bureaucracy, I tried to further previous research that evidenced how their different history and experiences shaped their interests, which informs the way they later engaged or disengaged themselves from the project to install an ARV manufacturing plant in Mozambique. Similarly, the experiences and interests of the Mozambican health experts made some of the most pertinent and experienced actors withdraw, caught between a will of autonomy in drug supply, the promises of new cooperation partners, dependence from donors, regional arrangements of intellectual property and other regulations.

As some actors withdrew from the drug plant initiative, they contributed to displacing its objective and meaning. As new actors mobilised around the project and assigned new meanings to it, the relative shape and importance of the Brazilian HIV/AIDS experts who originated this dynamic changed. Therefore, continuing to associate the factory with HIV/AIDS models or policy transfer only highlights a gap between the plan and the implementation process. Looking at the process of how some actors quit and others remained loyal or became new spokespeople to the project reveals the compromises and recompositions that help understand how the state-owned Mozambican drug plant came to exist.

Notes

- 1 The protocol for this research was not submitted to an Ethics Committee because French and Mozambican ethics and deontological norms did not require it, as I did not interview patients in clinics or hospitals, nor did observations in such sites or used medical records. I did not present a Term of Consent in paper but followed the usual questions and statements in these documents with all participants.

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Como os especialistas resistem a um projeto de cooperação para o desenvolvimento? O caso da fábrica de medicamentos genéricos Moçambique-Brasil

Resumo: A cooperação entre o Brasil e Moçambique para estabelecer uma fábrica estatal de medicamentos genéricos em Moçambique foi identificada como uma colaboração Sul-Sul para o desenvolvimento inovadora e pouco ortodoxa. Sua implementação – com suas traduções, adaptações, lacunas e contradições – faz dela um objeto interessante para a sócio-anthropologia do desenvolvimento e da ação pública. Uma abordagem neste campo é focar a resistência de grupos-alvo de projetos de desenvolvimento. Pesquisas anteriores destacaram as críticas à implementação do ‘projeto da fábrica’ ou as discrepâncias de discurso e representações do projeto entre autoridades moçambicanas e brasileiras. Entretanto, durante o processo de negociação, os principais especialistas em saúde de ambos os países se retiraram voluntariamente do desenho do projeto ou foram críticos de sua concepção e evolução. Focando no que poderia ser visto como uma forma de resistência, analisaremos quem são os especialistas que se distanciaram, suas razões, e interrogaremos como sua retirada levou a algumas das lacunas e questões de tradução no processo de implementação. O presente artigo baseia-se em entrevistas no Brasil, Moçambique e na Europa com especialistas em saúde e farmacêutica, diplomatas e funcionários governamentais. Também analisamos relatórios governamentais de ambos os países, incluindo arquivos do Ministério das Relações Exteriores do Brasil.

Palavras-chave: Cooperação Sul-Sul; antropologia da ação pública; Brasil; Moçambique; produção local de medicamentos.

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